ABSTRACT OF THE DISCLOSURE

Data other than inserted "0"s are selected by first selectors from among a plurality of data included in input data to which zero value interpolation is carried out at an interpolation circuit. Besides, coefficients by which the data selected by the first selectors should be multiplied are selected by second selectors. The data selected by the first selectors are multiplied by the coefficients selected by second selectors in multiplication circuits. Then, an adding circuit adds all of the multiplied results and outputs the added result as the desired filter characteristic.